Note: Use additional pages if more space is needed.

BUDGET ITEM NO.	A/U NO.	REGION	CAPITAL TYPE (see back)	AFUDC (see back)	Estimated Expenditures (Direct Capital Cost Only)			
231	326	West	Storage	☐ Yes ☐ No	Year	This Request	Previous Authorization	Total Authorization
Activity # Investment				PARTIAL AUTHORIZATION ☐ Yes ☐ No	2008	$ 8,000,000	$	$ 8,000,000
Activity # Retirement					2009	$ 11,500,000	$	$ 11,500,000
Activity # Investment						$	$	$
Activity # Retirement					-	$	$	$
FILE NO.	NBA / MR / PI / SI NO.		ESTIMATED START DATE	EST. COMPLETION	Retired	$ 500,000	$	$ 500,000
			Year 2008	Year 2009				
			Quarter 1	Quarter 4	Total	$ 20,000,000	$	$ 20,000,000

WP(F-4).3 1/10

Project Location
Troy Grove Station # 50

Project Description
Replace two (2) of the three (3) existing Orenda-DeLaval centrifugal turbine compressor units

Alternatives Considered
1. Do Nothing
2. Run the existing units until failure and then proceed with a replacment strategy
3. Contract for additional pipeline transport and the cooresponding gas supply equivalent to the 400 MMcf/d deliverability of these units
4. Replace the two (2) of the existing units before a catastrophic failure occurs.

Reason for Request

The Orenda compressor units were manufactured in the mid 1950's and installed in 1964. They are aero-derivative, non-industrial units that are becoming increasingly difficult to maintain and the frequency of significant failures has increased. The lead time for parts and length of overhauls following failures has reached unacceptable levels to ensure reliable service.

Reason for Budget Revision

For Revisions Only	Reimbursable?	Income Taxes on Reimbursable Projects	Included in overall budget?
Revision: ☐ 1 ☐ 2 ☐ 3 ☐ 4	☐ No ☐ Yes ___%	☐ No (Public Interest) ☐ Yes (Private Party) see instructions	☒ Yes ☐ No Dollars and year(s): 8.0 MM in 2008, 12.0 MM in 2009

Operating Expense Impact (specify in detail)

Economic Assessment Data

Item (see page 2)	Value
Cost of Capital (after tax)	%
Net Present Value at C/C (after tax)	$
Internal rate of return (IRR), if applicable	%

DUE TO RELIABILITY ISSUES
NO VIABLE ALTERNATIVES

Financial Analysis and Projects Approval

By _____ Date 2-1-08

Approvals

TAG APPROVAL	DATE	I.T.S.C. APPROVAL	DATE
PRINT RECOMMENDED BY	DATE	PRINT APPROVED BY VICE-PRESIDENT	DATE
Joe Deters	01-17-08	Gary Bartlett	01-17-08
RECOMMENDED BY SIGNATURE C.E.W.	1-17-08	APPROVED BY SIGNATURE – VICE-PRESIDENT	1-17-08
APPROVED BY CMT	DATE	APPROVED BY EXECUTIVE COMMITTEE	DATE
Barbara A. Zeller	11/25/08		
CMT COMPLETION BY	DATE	POST INVESTMENT REVIEW ☐ Yes ☐ No ☐ Undecided If yes, Quarter_____ Year_____	
ACCOUNTING APPROVAL - CAPITALIZED SOFTWARE		BUDGET COMPLETION/ TOLERANCE CHECK BY	DATE

Forward completed form to: Supervisor Plant Accounting / GO-5 East

RECENT FTS CONTRACTS:

			Daily reservation		Annual/MMBtu 1/	Storage Deliverability 200000 MMBtu Annual Replacement Costs	Total Annual Replacement Cost	Supported Investment at 16% Carrying Cost
ANR								
ETS service (1/24)	winter service	Southeast	$ 0.1948		$ 29	$ 5,884,350	$ 5,884,350	$ 36,777,188
ETS service (1/24)	annual service	Southeast	$ 0.1700		$ 62	$ 12,409,920	$ 12,409,920	$ 77,562,000
ETS service (1/24)	annual service	Southwest	$ 0.3241	(max rate)	$ 118	$ 23,659,300	$ 23,659,300	$ 147,870,625
						$ -		
NNG	annual service		$ 0.1825		$ 67	$ -		
						$ 13,322,500	$ 13,322,500	$ 83,265,625
NGPL	annual service	south texas	$ 0.1425		$ 52	$ -	$ -	
	annual service	texok	$ 0.1425		$ 52	$ 10,402,500	$ 10,402,500	$ 65,015,625
	annual service	midcontinent	$ 0.3281	(max rate)	$ 120	$ 10,402,500	$ 10,402,500	$ 65,015,625
	annual service	amarillo	$ 0.2170	(max rate)	$ 79	$ 23,951,300	$ 23,951,300	$ 149,695,625
						$ 15,841,000	$ 15,841,000	$ 99,006,250
						$ -		
						$ -		
						$ -		
			Average		$83	$ 16,553,339	$ 16,553,339	$ 103,458,366

1/ Excludes commodity and fuel.

WP(F-4) 3 3/10

NICOR GAS COMPANY
BOARD OF DIRECTORS APPROVAL

NEW PROJECT

Budget Item No. 231 – Troy Grove Compressor Replacements

This project involves replacing two of the three Orenda compressors at Troy Grove, unit #6 and unit #7. The units will be replaced with new 10,000 HP compressor units. The Orenda compressors being replaced were manufactured in the mid 1950's and installed in 1964. They are aero-derivative, non-industrial units that are becoming increasingly difficult to maintain and the frequency of significant failures has increased. The lead time for parts and length of overhauls following failures has reached unacceptable levels to ensure reliable service.

Total Authorization $20,000,000

Action required:

Adopt the following resolution:

RESOLVED: That the Board of Directors hereby approves the expenditure of $20,000,000 for the replacement of two compressors at the Troy Grove storage facility.

Presented at the Board Meeting
of February 21, 2008

Office of Executive Vice President
Operations

Orenda Compressor Replacement Project

CMT Meeting

January 25, 2008

Project Scope

- Replace two (2) of the three (3) existing Orenda 9,900 Hp Compressor Units at Troy Grove
- The retired units will be used for parts to keep the remaining operating reliably
- Dismantle and dispose of Cooper #28 & #29 to facilitate siting of the new units

Orenda Replacement Project

- Troy Grove requires mechanical compression to support its peak day deliverability of 1.1 Bcf.
- This represents over 40% of total peak day storage deliverability and about 22% of total system forecasted design day demand.

Orenda Replacement Project

- The Orenda compressors that will be replaced represent about 27% of the required horsepower for Troy Grove Peak Day deliverability of 1.1 Bcf.
- The capacity of these units is about 36% of the field's Peak Day deliverability of 1.1 Bcf.

Orenda Replacement Project

- Designed and built in the 1950's
- Aero-derivative, non-industrial
- Installed at TG 1963/1964
- Orenda Aerospace is the single source support for maintenance and parts

Orenda Replacement Project

- Seven catastrophic failures since 1994
- Average repair time – 8.5 months
- Based on typical run annual hours - Failure Frequency = 950 hours
- Rendering the failed unit unavailable for winter deliveries once every 3 – 4 yrs.

Orenda Replacement Project

Project Budget Estimate

	Per Unit	Extended Cost
Compressor Unit	$ 4,000,000	$8,000,000
Material	1,000,000	2,000,000
Contract Labor	2,400,000	4,800,000
Company Labor	150,000	300,000
Building	700,000	1,400,000
Electrical	600,000	1,200,000
Engineering Design	350,000	700,000
Contigency	800,000	1,600,000
TOTALS	$10,000,000	$20,000,000